CLAIMS

What is claimed is:

1. A pouch having at least one sheet comprising a laminate comprising:

a polyester outer layer;

a polypropylene inner layer; and

a first solventless aliphatic polyurethane adhesive bonding together two adjacent layers of said laminate and including exfoliated clay platelets forming a functional barrier to the passage of gases through the at least one sheet; and

the pouch including a storage space substantially enclosed by said at least one sheet.

2. A pouch according to claim 1, further comprising: a polyamide layer between said polyester outer layer and said polypropylene inner layer and bonded to one of said polyester outer layer and said polypropylene inner layer by said first adhesive; and a second adhesive bonding said polyamide layer to the other of said polyester outer layer and said polypropylene inner layer.

3. A pouch according to claim 2, wherein said second adhesive is the same as said first adhesive.

4. A pouch according to claim 2, wherein said polyamide layer is made of nylon.

5. A pouch according to claim 1, wherein said polyester layer is made of polyethylene terephthalate.

6. A pouch according to claim 1, wherein said polypropylene layer is cast polypropylene.

7. A pouch according to claim 1, which is capable of being retorted at a temperature of at least 120°C without damage.

8. A pouch according to claim 1 wherein the pouch has at least one seam, which joins edges of two portions of the laminate, which edges lie face to face with the said polypropylene layers of the two portions of the laminate facing one another.

9. A pouch according to claim 3, wherein the bonding is effected by welding of the polypropylene.

10. A pouch according to claim 1, wherein said first adhesive is a copolymer of an aliphatic diisocyanate and a diol.

11. A pouch according to claim 1, wherein said exfoliated clay material comprises montmorillonite clay platelets surface-modified by replacing sodium ions with quaternary onium ions.

12. A pouch according to claim 1, wherein the storage area contains a product, and the at least one sheet is sealed so as to substantially inhibit the ingress of bacteria into the storage area.

13. A laminated material for use in a retortable pouch, the laminated material comprising:

a polyester first layer;

a polyamide second layer adhesively attached to the first layer with a first solventless adhesive including clay platelets; and

a polypropylene third layer attached to the second layer with a second solventless adhesive.

14. A material according to claim 13, wherein the first solventless adhesive and the second solventless adhesive are the same.

15. A material according to claim 13, wherein the second solventless adhesive includes clay platelets.

16. A material according to claim 13, wherein the said polyester is polyethylene terephthalate.

17. A material according to claim 13, wherein the said polyamide is nylon.

18. A material according to claim 13, wherein the said polypropylene is cast polypropylene.

19. A material according to claim 13, wherein the said clay platelets are surface-modified montmorillonite platelets.

20. A laminated material for use in a retortable pouch, the laminated material comprising:

a polyester first layer; and

a polypropylene second layer adhesively attached to the first layer with a

solventless adhesive including clay platelets.

21. A material according to claim 20, wherein the said polyester is polyethylene terephthalate.

22. A material according to claim 20, wherein the said polypropylene is cast polypropylene.

23. A material according to claim 20, wherein the said clay platelets are surface-modified montmorillonite platelets.